Amendments to the Specification:

Please replace the paragraph beginning at page 6, line 8, with the following amended paragraph:

In accordance with an embodiment of the present invention, catheter 10 includes a collection array having a plurality of collection lumens 26 around balloon 20. Each collection lumen 26 could be defined by first circumferential wall 27, second circumferential wall 28, and a plurality of radial walls 30. In one embodiment, at least one of the radial walls 30 may be substantially more rigid than both first and second circumferential walls 27 and 28, respectively. In another embodiment, all radial walls 30 could be substantially more rigid than both first and second circumferential walls 27 and 28, respectively. In use, the rigidity of radial walls 30 could aid in rupturing the one or more plaque deposits when the collection array 29 is extended, and may also reduce the likelihood of occluding collection lumens 26 when extracting thrombi, debris, core material urged from the one or more ruptured plaque deposits, etc., from the lumen of the blood vessel.

Please replace the paragraph beginning at page 6, line 20, with the following amended paragraph:

The distal end of the collection array 29 may consist of a plurality of collection ports 32, each collection port being in fluid communication with at least one collection lumen 26. Additionally, the proximal end of the collection array 29 may consist of retrieval port 18 fluidly coupled to suction means 34, such as a vacuum source, to enable extraction of thrombi, debris, urged core material, etc., from the lumen of the blood vessel. In use, thrombi, debris, core material, etc., entering collection lumens 26 through collection ports 32 could travel along flow paths 60 within the collection array 29, and extracted through retrieval port 18 along path 62.

Please replace the paragraph beginning at page 7, line 6, with the following amended paragraph:

The collection array 29 may have a contracted position in which collection lumens 26 are somewhat collapsed, and an expanded position in which collection lumens 26 are extended and substantially unobstructed. In one embodiment, collection lumens 26 could be radially extended or collapsed, respectively, by inflating or deflating balloon 20. Balloon wall 22, defining an outer extent of balloon 20, may engage first circumferential wall 27 when balloon 20 is inflated. Collection lumens 26 could then be extended upon further inflating balloon 20. Balloon wall 22 may be retracted and disengaged from first circumferential wall 27 by deflating balloon 20. The collection array 29 could be designed and constructed such that collection lumens 26 may collapse when balloon wall 22 disengages from first circumferential wall 27. In an alternate embodiment, the collection array could be radially expanded or contracted by a mechanical means, such as a plurality of resilient arms.

Please replace the paragraph beginning at page 8, line 9, with the following amended paragraph:

Figure 3 is a schematic of catheter 11 with proximally oriented collection ports 32 in accordance with another embodiment of the present invention. Except for the direction in which collection ports 32 face, and the flow direction of material through the collection array 29, catheter 11 of Figure 3 is substantially similar to the above described catheter 10 of Figure 1. Therefore, a detailed description for catheter 11 of Figure 3 is not repeated. In use, thrombi, debris, core material, etc., entering collection lumens 26 through collection ports 32 could first travel within the collection array 29 along flow paths 50 towards the distal end of catheter 11. Proximate the distal end of catheter 11, the collection array 29 may turn 180 degrees towards the proximal end of catheter 11, causing a change in flow direction therein as illustrated by flow paths 52. Thereafter, thrombi, debris, core material, etc., within the collection array 29 could travel along path 54 towards the proximal end of catheter 11, and subsequently get extracted through retrieval port 18 along path 56.

Please replace the paragraph beginning at page 9, line 7, with the following amended paragraph:

In one embodiment of a method for removing one or more plaque deposits 102, the distal portion of catheter 10 may be inserted into the lumen of blood vessel 100 and collection ports 32 positioned proximate the one or more plaque deposits 102. One of numerous means, such as, inflating balloon 20 using methods well known in the art, mechanical means such as a plurality of resilient arms, etc., could be used to extend the collection array 29. When fully extended, balloon wall 22 and/or second circumferential wall 28 of collection lumens 26 could engage the inner wall of blood vessel 100 and/or the one or more plaque deposits 102. The distal portion of catheter 10 may then be manipulated to rupture the one or more plaque deposits 102. Core material 104 urged from the one or more ruptured plaque deposits 102 could be extracted from the lumen of blood vessel 100 by fluidly connecting a suction means 34 to retrieval ports 18 at the proximal end of the collection array 29. Urged core material 104 may be drawn along flow paths 106 into collection lumens 26 through the one or more collection ports 32. In some instances, the presence of core material 104 within blood vessel 100 may cause thrombi to form. Additionally, the process of rupturing the one or more plaque deposits 102 could release debris within the lumen of blood vessel 100. Such thrombi, debris, etc., proximate of collection ports 32 may also be drawn along flow paths 106 into the collection array 29, and extracted from the lumen of blood vessel 100 by suction means 34.